

CLAIMS

What is claimed is:

1. A jumper cable module, comprising:
 - (a) a pulley connected to a base plate; and
 - 5 (b) a cam pivotally connected to said base plate, wherein:
the jumper cable module is configured to provide tensioning to a jumper cable (i) placed within the jumper cable module and (ii) connected to connection points, which tensioning is achieved by rotating the cam to a selected angular position.
- 10 2. The invention of claim 1, further comprising a tensioning mechanism configured to fix the cam in the selected angular position.
- 15 3. The invention of claim 2, wherein the tensioning mechanism comprises:
 - (1) a set of nested holes in the cam arranged in a circle around the pivoting point of said cam;
 - (2) a set of matching nested holes in the base plate; and
 - (3) at least one pair of spring-loaded balls inserted into at least one pair of holes of the cam and base plate, wherein the at least one pair of spring-loaded balls skips and settles in a matching pair of nested holes as the cam is rotated about the pivoting point.
- 20 4. The invention of claim 2, wherein the tensioning mechanism comprises a serrated edge ratchet.
- 25 5. The invention of claim 1, wherein the pulley comprises a grooved disk pivotally connected to the base plate.
6. The invention of claim 1, wherein the cam comprises a rectangular plate with rounded corners, which rectangular plate is grooved along at least a portion of its perimeter.
- 30 7. The invention of claim 1, further comprising a round plate attached to the cam, wherein the center of the round plate corresponds to the pivoting point of the cam and the cam further comprises a structure extending beyond the round plate to enable rotation of the cam.
- 35 8. The invention of claim 1, further comprising a spring-loaded leg connected between the base plate and a board with the spring of the leg positioned between the base plate and the board to provide support for the jumper cable module.

9. The invention of claim 1, wherein:
the pulley is part of a stack of two or more pulleys connected to the base plate;
the cam is part of a stack of two or more cams pivotally connected to the base plate, wherein
5 each cam in the stack of cams has a separate tensioning mechanism and rotates independently of
the other cams to provide tensioning for a different jumper cable.

10. The invention of claim 9, wherein the jumper cable module is configured to add or
subtract one or more pairs of pulleys and cams to increase or decrease capacity of the jumper
10 cable module.

11. A method of tensioning a jumper cable connected to connection points, the method
comprising the steps of:

(a) placing the jumper cable within a jumper module, wherein the jumper cable module
15 comprises a pulley connected to a base plate and a cam pivotally connected to said base plate; and
(b) rotating the cam to a selected angular position to achieve desired tension in the jumper
cable.

12. The invention of claim 11, wherein the jumper cable module further comprises a
20 tensioning mechanism and step (b) comprises the step of fixing the cam at the selected angular
position using the tensioning mechanism.

13. The invention of claim 12, wherein the tensioning mechanism comprises:
(1) a set of nested holes in the cam arranged in a circle around the pivoting point of said
25 cam;
(2) a set of matching nested holes in the base plate; and
(3) at least one pair of spring-loaded balls inserted into the holes of the cam and base
plate,
wherein, in step (b), the at least one pair of spring-loaded balls skips and settles in a matching pair
30 of nested holes.

14. The invention of claim 12, wherein the tensioning mechanism comprises a serrated
edge ratchet.

15. The invention of claim 11, wherein the pulley comprises a grooved disk pivotally connected to the base plate and step (a) comprises the step of wrapping the jumper cable around the pulley one or more times.

5 16. The invention of claim 11, wherein the cam comprises a rectangular plate with rounded corners, which rectangular plate is grooved along at least a portion of its perimeter, and step (a) comprises the step of placing the jumper cable within the groove of the cam.

10 17. The invention of claim 11, further comprising a round plate attached to the cam, wherein the center of the round plate corresponds to the pivoting point of the cam.

18. The invention of claim 11, further comprising a spring-loaded leg connected between the base plate and a board with the spring of the leg positioned between the base plate and the board to provide support for the jumper cable module.

15 19. The invention of claim 11, wherein:
the pulley is part of a stack of two or more pulleys connected to the base plate;
the cam is part of a stack of two or more cams pivotally connected to the base plate, wherein each cam in the stack of cams has a separate tensioning mechanism and step (b) comprises the step 20 of rotating each cam in the stack of cams independently of the other cams to provide tensioning for a different jumper cable.

20. The invention of claim 19, wherein the jumper cable module is configured to add or subtract one or more pairs of pulleys and cams to increase or decrease capacity of the jumper 25 cable module.